

**Bulloch County Extension**

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**Title of Project**

Assessment of Peanut Fungicide Treatments on White Mold Disease in Bulloch County

**II.) Principal Investigator and Cooperator**

Bill Tyson, Bulloch County Cooperative Extension; Dr. Bob Kemerait, UGA Extension Peanut Pathologist; Amanda Smith, UGA Extension Economist; Stilson Farms (Wade & Matt McElveen), Bulloch County farmers.

**III.) Objective(s)**

1. To collect large plot, on-farm, multi-year data on efficacy of fungicides on soilborne diseases of peanut. The data collected is of real importance to growers in Bulloch County and the southeast.
2. To compare efficacy of fungicide applications against leaf spot and stem rot (white mold).
3. Develop and conduct a relevant, timely soilborne peanut fungicide research trial that will provide data used by farmers statewide. The specific goals of the research trial will be to evaluate ten different fungicide treatments.

**IV.) Plan of Action**

The peanut fungicide trial was planted to GA-06G on 7 May 2020. The trial contained three replications in a standard randomized block design. The plots were planted on 38" twin-row peanut spacing. Disease counts were taken for leaf spot and white mold for each of the fungicide treatments. The trial concluded with harvest. Yield was determined by weighing each individual plot. The results are being used by the UGA Peanut Pathologist and county agent for presentations during 2021 county peanut production meetings.

**V.) Results**

There is a strong relationship between white mold incidence and peanut yield. There was a 614-pound per acre yield difference between the highest and lowest yielding fungicide programs. Leaf spot was well controlled in all fungicide programs. The hot and dry conditions throughout the majority of the growing season were ideal for the development and spread of white mold. The difference in yield was attributed to the amount of white mold hits per fungicide program, which ranged from 14 to 34 hits per 200 row feet. The Lucento/Elatus/Convoy fungicide program was top yielder at 3640 pounds per acre and produced \$544 per acre, which was the best return on investment (ROI). The lowest ROI was produced by the Priaxor/Provysol/Convoy/Muscle ADV/Echo 720 fungicide program which totaled \$433 per acre. There was no statistical difference in the top four yielding programs which included; Lucento/Elatus/Convoy, Elatus (3)/Miravis, Priaxor/Umbra and Velum Prime/Lucento/Elatus (2).

## Summary 2020 Bulloch County Peanut Fungicide Trial

<u>TRMT</u>	<u>Fungicides</u>	<u>Avg WM</u>	<u>Rank</u>	<u>Avg Yield/A</u>	<u>Rank</u>	<u>Fungicide + App Cost/A</u>	<u>Profit/A</u>
1	Velum Prime IF; Elatus 2X; Lucento 2X; Echo 720 1X	23.3	4	3430	4	\$128.04	\$480.74
2	Velum Prime IF; Propulse 1X; Provost Silver 2X; Elatus 1X; Echo 720 1X	29.3	6	3285	5	\$148.72	\$434.29
3	Muscle ADV 4X; Echo 720 2X	34.0	7	3026	8	\$51.80	\$485.31
4	Priaxor 1X; Umbra 2X; Muscle ADV 2X; Echo 720 3X	14.2	1	3453	3	\$112.36	\$500.55
5	Lucento 2X; Convoy 1X; Elatus 1X; Echo 720 2X	14.3	2	3640	1	\$101.61	\$544.44
6	Approach Prima 1X; Fontelis 3X; Muscle ADV 2X; Echo 720 1X	27.2	5	3203	7	\$107.26	\$461.33
7	Elatus 3X; Miravis 2X; Echo 720 1X	20.0	3	3500	2	\$95.75	\$525.43
8	Priaxor 2X; Provysol 2X; Convoy 2X; Muscle ADV 1X; Echo 720 1X	14.3	2	3284	6	\$149.86	\$433.05

*Profit = USDA loan rate (\$355/ton) – fungicide cost*

**Cooperator: Stilson Farms/Wade & Matt McElveen**



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